

CLAIMS

1/ Apparatus for supporting a preform, manufactured in an installation for manufacturing or building up preforms having supporting cores, said installation including at least rotation means having a horizontal axis of rotation and two mounting points between which the supporting core of the preform to be manufactured or built up is mounted, plasma-torch and material-supply means disposed radially relative to said supporting core and being mounted to move in axial translation relative to and parallel to the supporting core so as to make said preform around said supporting core, controlled support means constituting additional localized abutment points between said mounting points for said preform being manufactured or built up, wherein the controlled support means are prevented from moving in axial translation relative to the preform.

2/ Apparatus according to claim 1, wherein the controlled support means comprise: means for detecting the sag of the preform; at least one support element mounted on controlled positioning means mounted to move between an active end position in which said support element is in contact with said preform being manufactured, and an inactive end position in which the support element is not in contact with said preform being manufactured; and servo-control means for servo-controlling the controlled positioning means in the active end position to a predetermined reference value C for the sag of the preform.

3/ Apparatus according to claim 2, wherein the support element includes at least one free wheel whose axis is parallel to the supporting core, which wheel is mounted to rotate freely on the controlled positioning means, and has a tread strip which comes into tangential contact

with the preform being manufactured, in the active end position.

4/ Apparatus according to claim 2, including
5 synchronization means for synchronizing the controlled
positioning means with the relative movement in axial
translation between the preform and the plasma-torch and
material-supply means, so as to go to the inactive end
10 position when the plasma-torch and material-supply means
cross paths with said positioning means.

5/ Apparatus according to claim 2, including a plurality
of support elements, each of which has associated
positioning means, the elements being disposed at regular
15 axial intervals 1 and radially to the horizontal axis of
rotation of said rotation means.

6/ Apparatus according to claim 3, wherein, in their
active end positions, the free wheels are in contact with
20 the bottom of the periphery of the preform.

7/ An installation for manufacturing or building up
preforms having supporting cores, said installation
including at least rotation means which have a horizontal
25 axis of rotation and on which the supporting core of the
preform to be manufactured or built up is mounted,
plasma-torch and material-supply means disposed radially
relative to said supporting core and being mounted to
move in axial translation relative to and parallel to the
30 supporting core so as to manufacture or build up said
preform around said supporting core, said installation
including support apparatus according to claim 1.

8/ A method of supporting a preform being manufactured or
35 built up in an installation according to claim 7,
wherein, during preform manufacture or building-up:

the value of the sag of the preform is compared with the reference value;

the positioning means are controlled so as to reach said reference value;

5 the positioning means are controlled such that they are synchronized with the relative movement in axial translation between the preform and the plasma-torch and material-supply means, so that the positioning means go to the inactive end position when the plasma-torch and
10 material-supply means cross paths with said positioning means; and

the positioning means are returned to the active position after a cooling time-delay.

15 9/ A method of cutting a preform manufactured or built up in an installation according to claim 7, wherein, immediately after manufacture or building-up, and with the preform still rotating:

the value of the sag stress of the core is compared
20 with the reference value;

the positioning means are controlled so as to reach said reference value;

the plasma torch is positioned facing the chosen cutting section; and

25 the plasma torch is actuated so as to cut the preform.

10/ A preform having a supporting core, wherein said preform is manufactured or built up by using the method
30 according to claim 8.